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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,182	10/11/2007	Maurice Bourlion	CPL-06-1208	5880

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IP GROUP OF DLA PIPER LLP (US)
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EXAMINER

BECCIA, CHRISTOPHER J

ART UNIT	PAPER NUMBER
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3775

NOTIFICATION DATE	DELIVERY MODE
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02/24/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pto.phil@dlapiper.com

Office Action Summary	Application No. 10/589,182	Applicant(s) BOURLION ET AL.	
	Examiner CHRISTOPHER BECCIA	Art Unit 3775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant has submitted replacement drawings. Examiner's Objection has been withdrawn.
2. As to Claim 19, Applicant argues that Lum fails to disclose "a means of angular location formed by at least one electrode punctually coinciding with the peripheral surface of the penetration instrument, the coinciding surface of the electrode having a position set off from a longitudinal axis of the instrument, and a means for detecting a position of the at least one electrode." Examiner respectfully disagrees. Fig. 2A of Lum shows an electrode 125 disposed off on the longitudinal axis of the instrument, and a means for measuring impedance between electrodes (Col. 3, Lines 11-27), which in turn is controlled by a processor 108 which determines the position of the electrode.

As to determining angular location, Examiner states that any penetration depth determined by the device of Lum and Cory, is relative to a reference point. The system is not constrained by Cartesian coordinates; an x-y distance can also be interpreted in a polar coordinate system as an 'angular location.' Also, using the offset electrodes 123 and 125 of Lum, a known depth of the needle, and trigonometry, and angular location of the electrode can be determined.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 19-21, 24-32, 35, and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,391,005 to *Lum et al.* in view of U.S. Patent No. 6,706,016 to *Cory et al.*

As to **Claim 19**, *Lum* discloses an exploration device to monitor the penetration of an instrument in an anatomic structure (100 and Col. 3, Lines 60-67 – Col. 3, Lines 1-9) comprising: at least two electrodes (123 and 125 at tip 103 in Col. 3, Lines 10-53); a means for measuring impedance between the electrodes (Col. 7, Lines 5-16); a means of angular location formed by at least one electrode punctually coinciding with a peripheral surface of the penetration instrument (Col. 6, Lines 46-67 - Col. 7, Lines 1-5), the coinciding surface of the electrode having a position set off from a longitudinal axis the instrument (See 115 in Fig. 2A); and means for detecting a position of the at least one electrode (Col. 7, Lines 5-16 and Fig. 10).

As to **Claim 20**, *Lum* discloses an exploration device wherein the electrode punctually coincides with a lateral surface of the penetration instrument (125 on lateral surface of 110 in Fig. 2A).

As to **Claim 21**, *Lum* discloses an exploration device wherein the electrode punctually coincides with a peripheral surface of a distal end portion of the penetration instrument (125 on peripheral surface of a distal end portion of 110 in Fig. 2A).

As to **Claim 24**, *Lum* discloses an exploration device wherein the electrodes are a plurality of coinciding angularly spaced fixed electrodes and means for measuring

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impedance delivers a signal corresponding to each of the electrodes (123 and 125 are angularly spaced, Col. 3, Lines 28-53 and Col. 7, Lines 5-16) .

As to **Claim 25**, *Lum* discloses an exploration device wherein the electrodes are longitudinally and angularly spaced punctual contacts (123 and 125 are partially and discontinually coinciding with the peripheral surface of 110)

As to **Claim 26**, *Lum* discloses an exploration device wherein the electrodes are formed of longitudinal strips (123 and 125 are longitudinal strips in Fig. 2A).

As to **Claim 27**, *Lum* discloses an exploration device wherein the electrodes are distributed around the longitudinal axis of the penetration instrument (See 122 in Fig. 2B).

As to **Claim 28**, *Lum* discloses an exploration device wherein the electrodes are symmetrically arranged with respect to the longitudinal axis of the penetration instrument (See 122 in Fig. 2B).

As to **Claim 29**, *Lum* discloses an exploration device wherein the electrodes are conducting rods of circular section (See 122 in Fig. 2B).

As to **Claim 30**, *Lum* discloses an exploration device wherein the electrodes are formed by eccentric conducting rods (rods 136, not sharing the same central axis in Fig. 4).

As to **Claim 31**, *Lum* discloses an exploration device further comprising at least one electrode arranged at a distal end of the penetration instrument (125 at distal end of 110).

As to **Claim 32**, *Lum* discloses an exploration device wherein two electrodes are arranged at the distal end of the penetration instrument, the electrodes consisting of conducting rods of substantially concentric circular section (122 and 120 in Fig. 2B are concentric conductors).

As to **Claim 35**, *Lum* discloses an exploration device further comprising a central channel for passage of an additional instrument (Lumen 138 in Fig. 4).

As to **Claim 36**, *Lum* discloses an exploration device to monitor the penetration of an instrument in an anatomic structure (100 and Col. 3, Lines 60-67 – Col. 3, Lines 1-9) comprising: at least two electrodes (123 and 125 at tip 103 in Col. 3, Lines 10-53); an impedance measuring device between the electrodes (Col. 7, Lines 5-16); an angular locator formed by at least one electrode punctually coinciding with a peripheral surface of the penetration instrument (Col. 6, Lines 46-67 - Col. 7, Lines 1-5), the coinciding surface of the electrode having a position set off from a longitudinal axis the instrument (See 115 in Fig. 2A); and means for detecting a position of the at least one electrode (Col. 7, Lines 5-16 and Fig. 10).

Lum discloses the claimed invention except for a source of voltage supplying the at least two electrodes.

Cory discloses a depth determining instrument (Seen in Fig. 1A) wherein a source of voltage supplying the at least two electrodes (180, and Col. 6, Lines 22-38) in order to allow control of the current output through a fingertip control on the stimulating needle (Col. 5, Lines 50-53).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the exploration device of *Lum* with the voltage source modifications of *Cory* in order to allow control of the current output through a fingertip control on the stimulating needle.

3. **Claims 22, 23, 33, and 34** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,391,005 to *Lum et al.* in view of U.S. Patent No. 6,706,016 to *Cory et al.* in further view of U.S. Patent No. 6,951,549 to *Beyerlein*.

As to **Claims 22, 23, 33, and 34**, *Lum* in view of *Cory* disclose the claimed invention except for wherein the coinciding electrode is rotatably movable; wherein the coinciding electrode is driven at a speed of rotation so that the electrode sweeps at least 360 degrees per level of drilling of the penetration instrument in the bone structure; wherein the means for detecting comprises a visual marking on a handle of the exploration device; and further comprising a handle forming the means for detecting.

Beyerlein discloses a depth determining instrument (100) wherein the coinciding electrode is rotatably movable (Col. 11, Lines 60-67); wherein the coinciding electrode is driven at a speed of rotation so that the electrode sweeps at least 360 degrees per level of drilling of the penetration instrument in the bone structure (Col. 12, lines 10-17, Col. 9, Lines 32-44, and Col. 10, Lines 8-25); wherein the means for detecting comprises a visual marking on a handle (100) of the exploration device (Col. 8, lines 40-44); and further comprising a handle forming the means for detecting (Col. 8, lines 40-

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44) in order to determine tissue contact and penetration depth, while rotating the instrument into tissue, and providing a clear visual of the depth (Col. 1, Lines 34-58).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the exploration device of *Lum* with the voltage source modifications of *Cory* and rotational and visual modifications of *Beyerlein* in order to determine tissue contact and penetration depth, while rotating the instrument into tissue, and providing a clear visual of the depth.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER BECCIA whose telephone number is (571)270-7391. The examiner can normally be reached on M-F 7:30am - 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Barrett can be reached on 571-272-4746. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHRISTOPHER BECCIA/
Examiner, Art Unit 3775

/Thomas C. Barrett/
Supervisory Patent Examiner, Art
Unit 3775